

**CLAIMS:**

1. A handheld computing device comprising:
  - an electrical circuit comprising:
    - a processor, and
    - a memory device electrically coupled to the processor;
  - 5 a display screen electrically coupled to the electrical circuit;
  - an input device electrically coupled to the electrical circuit; and
  - a software application stored in the memory device, and when executed by the processor, the software application being adapted to provide instructions to graphically display a vector on the display screen simultaneously along with the numerical values for components of the vector.
- 10
2. The handheld computing device of claim 1, wherein the handheld computing device is a calculator.
3. The handheld computing device of claim 2, wherein the display screen comprises a liquid crystal display device.
4. The handheld computing device of claim 2, wherein the input device comprises a keypad on the calculator.
5. The handheld computing device of claim 1, wherein the handheld computing device is an electronic personal organizer.

6. The handheld computing device of claim 5,  
wherein the display screen comprises a touch sensitive screen, and  
wherein the input device comprises a simulated keypad displayed on the touch sensitive screen, such that a user can input a number or mathematical operator by contacting the touch sensitive screen.

5

7. The handheld computing device of claim 1, wherein the handheld computing device is a cellular telephone.

8. The handheld computing device of claim 1, wherein the handheld computing device is a pager.

9. The handheld computing device of claim 1, wherein the software application is further adapted to provide instructions to perform a vector math operation on one or more vectors.

10. The handheld computing device of claim 9, wherein the vector math operation is selected from a group consisting of a vector addition operation, a vector subtraction operation, a vector multiplication operation to provide a cross product, and a scalar multiplication operation to provide a dot product.

5

11. The handheld computing device of claim 9, wherein the software application is further adapted to provide instructions to allow a user to pick the vector for use in the vector math operation, concurrently while graphically viewing the vector on the display screen simultaneously with its numerical values for components.

5

12. The handheld computing device of claim 1, wherein the software application is further adapted to provide instructions to allow a user to graphically input the vector by incrementing a vector component with a cursor key on the input device, concurrently while graphically viewing the vector and vector changes on the display screen.

5

13. The handheld computing device of claim 1, wherein the software application is further adapted to provide instructions to allow a user to numerically input a vector component with the input device, concurrently while graphically viewing the vector on the display screen.

14. The handheld computing device of claim 1, wherein the memory device comprises a flash memory device.

15. The handheld computing device of claim 1, wherein the memory device comprise a synchronous dynamic access memory (SDRAM) device.

16. The handheld computing device of claim 1, wherein the input device comprises at least one soft key shown on the display screen corresponding to a button a keypad.

17. A handheld computing device comprising:

an electrical circuit comprising:

a processor, and

a memory device electrically coupled to the processor;

5 a display screen electrically coupled to the electrical circuit;

an input device electrically coupled to the electrical circuit; and  
a software application stored in the memory device, and when executed by the processor,  
the software application being adapted to provide instructions to:  
10           perform a vector math operation on one or more vectors; and  
graphically display an answer vector resulting from the vector math operation on  
the display screen simultaneously along with numerical values for at least one vector component  
of the answer vector.

18. A computer program adapted to be executed on a handheld computing device, and when  
executed on the handheld computing device, the computer program being adapted to provide  
instructions to graphically display a vector on a display screen of the handheld computing device  
simultaneously along with the numerical values for at least one component of the vector.

19. The computer program of claim 18, wherein the computer program is further adapted to  
provide instructions to perform a vector math operation on one or more vectors.

20. The computer program of claim 18, wherein the computer program is further adapted to  
provide instructions to allow a user to graphically input the vector by incrementing one or more  
of the at least one vector components with a cursor key on an input device of the handheld  
computing device, concurrently while graphically viewing the vector and vector changes on the  
5 display screen.

21. The computer program of claim 18, wherein the at least one component is selected from a group consisting of an X component of the vector corresponding to an X axis of a Cartesian coordinate system, a Y component of the vector corresponding to a Y axis of the Cartesian coordinate system, and a Z component of the vector corresponding to a Z axis of a Cartesian coordinate system.

5

22. The computer program of claim 18, wherein the at least one component comprises a radial component of the vector corresponding to a radial axis of a polar coordinate system.

23. The computer program of claim 18, wherein the at least one component comprises an angle component of the vector corresponding to an angle orientation on a polar coordinate system.

24. A portable handheld calculator, comprising:
- an electrical circuit comprising:
- a processor, and
- a memory device electrically coupled to the processor;
- 5 a display screen electrically coupled to the electrical circuit;
- an input device comprising a keypad, and the input device being electrically coupled to the electrical circuit; and
- a software application stored in the memory device, and when executed by the processor, the software application being adapted to provide instructions to:
- graphically display a vector on the display screen simultaneously along with the numerical values for components of the vector;
- 10 perform a vector math operation on one or more vectors, and graphically display an answer vector resulting from the vector math operation on the display screen simultaneously along with numerical values for at least one vector component of the answer vector;
- allow a user to graphically input a vector by incrementing one or more of its 15 vector components with a cursor key of the input device, concurrently while viewing the vector and vector changes on the display screen; and
- allow a user to numerically input a vector component for a vector with the input device, concurrently while graphically viewing the vector on the display screen.